

IN THE CLAIMS:

Please cancel claims 10-12 without prejudice or disclaimer, amend claims 1-9, and add new claims 14-21 as follows:

1. (Currently amended) A connection management apparatus ~~connectable via a communication network to be coupled to~~ [[both]] a first gateway belonging to a first network and connecting to a first terminal, [[and]] a second gateway belonging to a second network connecting to a second terminal, and a third gateway belonging to a third network, comprising:

a transmission/reception unit connectable to said ~~communication~~ first, second and third networks; and

a CPU connected to said ~~communication network; and~~ transmission/reception unit,

~~a memory connected to said transmission/reception unit and further connected to said CPU; wherein:~~

when a connection request issued from said first terminal to said second terminal is received by said transmission/reception unit, said CPU ~~reads out a program from said memory and executes the program to~~ judges whether or not a first connection [[can]] directly between the first and second networks is permitted under a predetermined connection restriction between networks to be established from said first terminal to said second terminal; [[and]]

when said first connection ~~cannot~~ is not permitted to be established directly from said first network to said second network as a result of said judgment, said CPU ~~furthermore reads out a program from said memory and executes the program to~~ generates an address required for establishing identifying a second connection including said first gateway, said second gateway and said third gateway, which are connectable from the first terminal to said second terminal, a second connection by which said first terminal is connectable connected to said second terminal and then [[to]] said CPU transmits a data containing said generated address from said transmission/reception unit to said first terminal, and transmits an address registration request containing said generated address from said transmission/reception unit to said first gateway and said third gateway for starting the second connection from said first terminal to said second terminal via said third gateway; and

when a notification notifying that said second connection has finished is received by said transmission/reception unit from said first terminal, said CPU transmits an address deletion request contained in said address registration request from said transmission/reception unit to said first gateway and said third gateway.

2. (Currently amended) A connection management apparatus as claimed in claim 1, further comprising a memory connected to said CPU, wherein[[:]]

said memory stores a database for judging as to whether or not the first connection from the first terminal to the second terminal can be established; and
said CPU executes said judgment by employing said database.

3. (Currently amended) A connection management apparatus as claimed in claim 1, wherein[[:]]

when said first connection ~~cannot~~ is not permitted to be established as judged a result of the judgment, said CPU ~~further reads out a program from said memory and executes the program to~~ retrieves the second ~~an another~~ communication path ~~of said second connection~~ from said first terminal to said second terminal; and

~~[[only]]~~ when ~~said another~~ the second communication path is available ~~in said memory~~ and retrieved accordingly, said CPU ~~executes the program and~~ generates said address.

4. (Currently amended) A connection management apparatus as claimed in claim 1, wherein[[:]] when said first connection ~~cannot~~ is not permitted to be established as judged a result of the judgment, ~~[[the]]~~ said CPU notifies such a fact to said first terminal[[:]], and ~~furthermore~~, the CPU generates said address after a request has been issued from said first terminal.

5. (Currently amended) A connection management apparatus as claimed in claim ~~[[1]]~~ 2, wherein[[:]] when said first connection ~~[[can]]~~ is permitted to be established as judged a result of the judgment, said CPU further reads out a program from said memory and executes the program to authenticate said first terminal and ~~[[then]]~~ generates said address after authentication of said first terminal is succeeded.

6. (Currently amended) ~~A connection control system connected via a communication network to be coupled to both a first terminal and a second terminal~~ a first a gateway belonging to a first network and connecting to a first terminal, a second gateway belonging to a second network and connecting to a second terminal, and a third gateway belonging to a third network, comprising:

~~a connection control apparatus and an address generation apparatus, each of which is comprised of: a transmission/reception unit connected to said communication network, a CPU connected to said communication network, and a memory connected to said transmission/reception unit and further connected to said CPU, including a first transmission/reception unit connected to said first, second and third networks and a first processor connected to said first transmission/reception unit; and~~
an address generation apparatus including a second transmission/reception unit connected to said first, second and third networks and a second processor connected to said second transmission/reception unit, wherein[[:]]

~~in said connection control apparatus, when a connection request issued from said first terminal to said second terminal is received by said first transmission/reception unit, said first processor judges whether or not a first connection directly between the first and second networks is permitted under a predetermined connection restriction between networks to be established from said first terminal to said second terminal, of said connection control apparatus reads out a program from said memory and executes the program to judge to whether or not a connection can be established from said first terminal to said second terminal; and~~

~~when said first connection cannot~~ is not permitted to be established directly from said first network to said second network as a result of said judgment, ~~said CPU of said connection control apparatus~~ first transmission/reception unit transmits a generation request for generating an address required for establishing a second connection by which said first terminal ~~[[can]]~~ is permitted to be connected to said second terminal via said third gateway to said address generation apparatus, from said transmission/reception unit of said connection control apparatus; and wherein:

~~in said address generation apparatus, the~~ said second transmission/reception unit of said address generation apparatus receives said generation request for generating said address[[:]], said second processor generates an address identifying said first gateway, said second gateway and said third gateway via which a second connection between said first terminal and said second terminal is permitted to be established, and said second

transmission/reception unit transmits a data containing said generated address to said first terminal and then transmits an address registration request containing said generated address to said first gateway and said third gateway for starting the second connection; and

when an notification notifying that said second connection has finished is received by a transmission/reception unit of said address generation apparatus from said first terminal, said second transmission/receptions unit transmits an address deletion request contained in said address registration request to said first gateway and said third gateway the CPU of said address generation apparatus reads out a program from said memory of the address generation apparatus and executes the program to generate said address required for establishing a second connection by which said first terminal can be connected to said second terminal; and said CPU of the address generation apparatus transmits data containing said generated address from the transmission/reception unit of said address generation apparatus to said first terminal.

7. (Currently amended) A connection control system as claimed in claim 6, wherein[[:]]

when said first connection cannot is not permitted to be established as judged by a result of said judgment made in said connection control apparatus first processor, said CPU of said connection control apparatus first processor further reads out a program from said memory of the connection control apparatus and executes the program to retrieves an another [[a]] communication path of said second connection from said first terminal to said second terminal; and

[[only]] when said another communication path of said second connection is available in said memory of the connection control apparatus and retrieved accordingly, the CPU of the connection control apparatus said first transmission/reception unit transmits said generation request for generating said address required for establishing [[a]] said second connection by which said first terminal can be connected to said second terminal from the transmission/reception unit of said connection control apparatus to said address generation apparatus.

8. A connection control system as claimed in claim 6, wherein[[:]] when said first connection cannot is not permitted to be established as judged by a result of said judgment made in the connection control apparatus said first processor, said connection control apparatus notifies such a fact to said first terminal; and furthermore, said address

generation apparatus generates said address connectable to said second terminal after a request has been issued from said first terminal.

9. (Currently amended) A connection control system as claim in claim ~~[[6]]~~ 7, wherein ~~[[:]]~~ ~~said connection control system is further comprised of:~~

~~an authentication apparatus equipped with a transmission/reception unit connected to said communication network; a CPU connected to said communication network; and a memory connected to said transmission/reception unit and further connected to said CPU; wherein:~~

~~when said first connection can~~ is not permitted to be established as judged by a result of the judgment made in said first processor connection control apparatus, the CPU of said authentication apparatus reads out a program from said memory of said authentication apparatus and executes the program to authenticate said first terminal; and further, said connection control apparatus notifies such a fact to said first terminal, and said address generation apparatus generates said address connectable to said second terminal after a request has been issued from said first terminal ~~said address generation apparatus generates said address after said authentication apparatus succeeds in authentication of said first terminal.~~

10-12. (Cancelled)

13. (New) A connection management apparatus as claimed in claim 2, wherein when said first connection is not permitted to be established as judged, said CPU notifies such a fact to said first terminal, and said CPU generates said address after a request has been issued from said first terminal.
14. (New) A connection management apparatus as claimed in claim 3, wherein when said first connection is permitted to be established as judged, said CPU reads out a program from a memory connected to said CPU and executes the program to authenticate said first terminal, and generates said address after authentication of said first terminal is succeeded.
15. (New) A connection control system as claimed in claim 6, further comprising an authentication apparatus which includes a third transmission/reception unit connected to

said first, second and third networks a third processor and a memory, and said third processor and said memory are connected to said third transmission/reception unit and to each other,

wherein when said first connection is permitted to be established as judged in said connection control apparatus, said third processor executes the authentication of said first terminal and then said address generation apparatus generates said address connectable to said second terminal after authentication of said first terminal is succeeded.

16. (New) A connection control system as claimed in claim 7, further comprising an authentication apparatus which includes a third processor, a memory and a third transmission/reception unit connected to said first, second and third networks, and said third processor and said memory being connected to said third transmission/reception unit and to each other,

wherein when said first connection is permitted to be established as judged in said connection control apparatus, said third processor executes the authentication of said first terminal and then said address generation apparatus generates said address connectable to said second terminal after authentication of said first terminal is succeeded.

17. (New) A connection control system as claimed in claim 8, further comprising an authentication apparatus which includes a third transmission/reception unit connected to said first, second and third networks, a third processor and a memory, and said third processor and said memory are connected to said third transmission/reception unit and to each other,

wherein when said first connection is permitted to be established as judged in said connection control apparatus, said third processor executes the authentication of said first terminal and then said address generation apparatus generates said address connectable to said second terminal after authentication of said first terminal is succeeded.

18. (New) A connection management apparatus as claimed in claim 1, wherein the predetermined connection restriction between networks is applicable to all terminals belonging to the networks.

19. (New) A connection control system as claimed in claim 6, wherein the predetermined connection restriction between networks is applicable to all terminals belonging to the networks.
20. (New) A connection management apparatus as claimed in claim 5, wherein prior to establishing the second connection, the authentication apparatus executes authentication of said first terminal and ensures that said first terminal is authorized to connect to the first, second and third gateways constituting said second connection.
21. (New) A connection control system as claimed in claim 15, wherein prior to establishing the second connection, said third processor of the authentication apparatus executes authentication of said first terminal and ensures that said first terminal is authorized to connect to the first, second and third gateways constituting said second connection.